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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/573,472 | 03/24/2006 | Frank Hoefler | 287292US0PCT | 9358 |
| 22850 | 7590 | 12/12/2008 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER | | | | |
| CHIANG, TIMOTHY S | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 4131 | | | | |
| NOTIFICATION DATE | | DELIVERY MODE | | |
| 12/12/2008 | | ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/573,472

Applicant(s)

HOEFER ET AL.

Examiner

TIMOTHY CHIANG

Art Unit

4131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 03/24/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 11, 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Keskey et al. (US Patent 4,690,995 hereinafter "Keskey").

In regards to instant claims 1, 15-20, Keskey discloses a process of stabilizing polymers synthesized from unsaturated carboxylic acid monomers (abstract). Keskey further discloses acrylic or methacrylic acid as suitable monomers for the said polymer (col. 6, lines 42-67). Keskey further discloses the stabilizing agent to comprise at least one amide group and at least one ester group in conjunction (col. 3, line 48 - col. 4, line 42).

In regards to instant claim 11, Keskey further discloses the viable amount of stabilizing agent used in the process of free-radical polymerization to include the range of "0.01 to 50 weight percent" (col. 2, lines 60-62) which the examiner construes as including the taught limitation of 0.1 to 1,000 ppm constitution of free-radical scavenger of the instant claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-10, 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knebel et al. (US Patent 6,329,543 hereinafter "Knebel").

Knebel discloses a process of synthesizing methacrylate polymers (col. 7, lines 36-40) involving a combination of polymerization inhibitors including hydroquinones (column 8, lines 1-9) and a chelating agent further disclosed as ethylenediaminetetraacetic acid known in the art as EDTA (col. 8, lines 12-19). EDTA is well known in the art as a viable chelating agent in stabilizing free-radical polymerization processes.

Though EDTA comprises of at least 2 glycine units, Knebel differs from the instant claims as the disclosed EDTA structure does not meet the taught limitations of R7 and R8 in the instant claim 2, 7, and 8, or the taught limitations of instant claim 10.

The reference differs from the instant application as little as a substitution of alkyl groups onto the hydroxyl groups of EDTA.

MPEP 2144.09 states the following:

2144.09 [R-6] Close Structural Similarity Between Chemical Compounds
(Homologs, Analogues, Isomers)

**>I. < REJECTION BASED ON CLOSE STRUCTURAL SIMILARITY IS
FOUNDED ON THE EXPECTATION THAT COMPOUNDS SIMILAR IN
STRUCTURE WILL HAVE SIMILAR PROPERTIES**

A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991)

The prima facie case of obviousness is made in that the difference between substituting hydrogen with an alkyl group such as methyl would not significantly alter the physical/chemical properties of EDTA in its chelating function in free-radical polymerization processes. The prima facie case of obviousness is also made in that that the difference between substituting ester groups with amide group which are known in the art as viable functional groups in free-radical scavengers would not significantly alter the physical/chemical properties of EDTA in its chelating function in free-radical polymerization processes.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify EDTA in such a way as to meet the taught limitations of the instant claims 2, 7, 8, and 10 perceiving that such substitutions would yield expected results and maintain the same chelating properties of unsubstituted EDTA.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY CHIANG whose telephone number is (571)270-7348. The examiner can normally be reached on Monday - Thursday 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 5712721376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner
Art Unit 4131

/TIMOTHY CHIANG/
Examiner, Art Unit 4131